GermanSolarZA

Inverter DC side over-allocation

Overview

What causes coupling in DC side of photovoltaic inverter?

There are multiple fault causes coupling in DC side of photovoltaic inverter. The changes of voltage, current and power are derived by fault mechanism analysis. The differences of failure feature are used to locate the fault cause.

What is DC overvoltage fault in inverter?

2.2. DC overvoltage fault The condition of DC overvoltage fault in inverter is that the DC capacitor voltage exceeds maximum allowable voltage Umax and maintains for a period of time, which triggers overvoltage protection and causes the inverter to stop.

How do DC faults differ from grid-connected inverters?

Due to the different mechanisms of DC faults caused by different causes, there are obvious differences in characteristic such as voltage and current. Using the fault features of grid-connected inverters, a fault diagnosis process combining multiple technical means is proposed.

How to limit output level of inverter?

In order to limit output level of inverter, there is often a limiter in control circuit. The inverter output dq axis voltage ud and uq after passing through current inner loop are used as the input of sinusoidal vector pulse width modulation (SVPWM), and then realizes the conversion from DC to AC. Fig. 2.

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Causes of DC overcurrent in photovoltaic inverters

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Abstract In this paper, the mechanism of DC overvoltage is discussed, which caused by block fault in the converter station connected with the active network, and the ...

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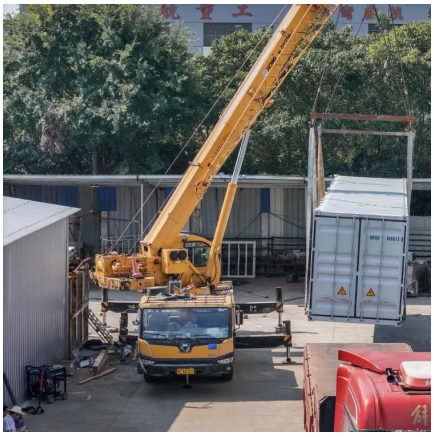

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DC-side faults mechanism analysis and causes location for ...

Due to the deep coupling of the DC faults for the two-stage photovoltaic (PV) inverters, it is very difficult to determine the specific causes of DC faults. In terms of this issue, ...

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